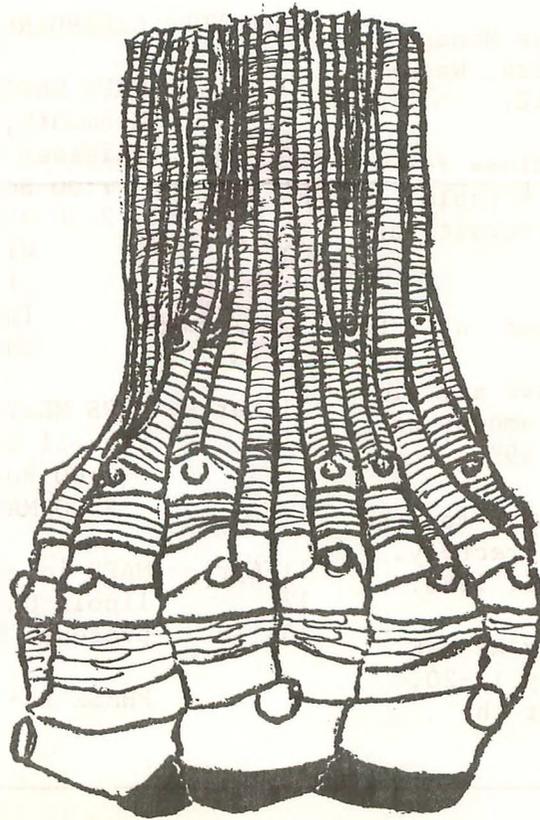


M.A.P.S. *Digest*

Official Publication of
Mid-America Paleontology Society

Volume 9 Number 2
February, 1986



Eirmocrinus grossus
Strimple and Watkins

MINUTES OF THE MEETING

The meeting was called to order by new President Karl Stuekerjuergen. 29 members present. Karl introduced the officers: Gil Norris, 1st Vice President; Doug DeRosear, 2nd Vice President; Jo Ann Good, Secretary; Marvin Houg, Treasurer. Directors: Tom Walsh, Jim O'Daniel, Alberta Cray.

The Treasurer's Report was read stating a balance of \$1,834.73. Motion to accept the report was made by Dick Johannesen, second by Bud Cray.

There was no Secretary's Report.

EXPO Report: Speakers this year include: Dr. R. A. Robison, Professor, The University of Kansas, Keynote--9:15 pm, Fri. April 11. Dr. Donald Mikulic, Illinois Geological Survey, Saturday am, April 12. Frederick J. Collier, Collections Manager, National Museum of Natural History, Washington, DC, Saturday pm, April 12.

Gil Norris is accepting reservations for displays, tables (\$10 or \$6 for ½ table) banquet (\$10). Rooms at the University are now filled.

No field trip is planned this year at EXPO.

Dues are due--\$10.00. If you have any old Applications, please update the amount of dues from \$7.00 to \$10.00 as of 1986.

Alberta Cray will be typing changes for the nodules for the new Membership Directory. Changes must be in by February 15, 1986.

MAPS is invited to have a display at MWF Show at South Bend, Indiana, July 17-20, 1986. Cases may be removed after the Show closes on Saturday.

Mary Boland, MAPS member, is MWF Paleo Chair-woman.

Doug DeRosear asked for suggestions for field trips. More next month.

Area shows--Geodeland, Macomb, March 15-16. Cedar Rapids, Iowa, March 22-23.

Marv Houg had a new book on Trilobites written by Tom Johnson, PO Box 28, Morrow, OH 45152-- cost \$12.95 + \$1.00 shipping and handling.

Speaker Dr. Terry Frest, The University of Iowa, gave a slide program on the Brainerd Fm of the Maquoketa found on a roadcut outside Dubuque, IA

Respectfully submitted
Jo Ann Good, Secretary

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MARK YOUR CALENDARS

1 Feb -- MAPS MEETING -- Monmouth College
Monmouth, Illinois. Haldeman-
Thiessen Science Center, Second Floor

1:00 Board Meeting

2:00 MAPS Meeting -- Larry A.

Wiedman, Paleoecologist, Dept.
of Geology. Paleo Environmental
Indicators for the famous Silica
Shale. Middle Devonian. Indiana



1 Mar -- MAPS MEETING -- Augustana College
Fryxell Museum, Rock Island, Illinois
1:00 Board Meeting

2:00 MAPS Meeting Begin PHASE III

11 Apr -- MAPS in conjunction with Western Il-
linois University, Macomb, Illinois,
12 presents EXPO VIII.
13

PHASE I -- Dreams-- Don't count sheep
count FOSSILS.

Cover: Eirmocrinus grossus Strimple and Watkins, new genus, new species as described in "Carboniferous Crinoids of Texas With Stratigraphic Implications: by Harrell L. Strimple and William T. Watkins, 1969, in Palaeontographica Americana. Vol. VI No. 40 Paleontological Research Institution, Ithaca, New York, U.S.A. 14850

Specimen shown is normal size found and drawn by Wm. T. Watkins, 223 Lyric Ave., San Antonio, Texas. It was found in the shale below Kickapoo Falls Limestone member, Millsap Lake Formation, Strawn Group, Desmoinesian, Pennsylvanian; about one-third mile below the falls on Kickapoo Creek southwest of Dennis, Hood County, Texas.

MARK YOUR CALENDARS Cont'd.

3 THINGS -- PLEASE NOTE 

11 Apr -- MAPS EXPO VIII
 12 PHASE II -- Concrete Plans --
 13 Crystallize: Display, Tables,
Next to?, Fossil for Auction,
Room Reservation, Dinner Re-
servation, Swap material or \$\$
 (Some of each likely), Racin'
shoes (only DD allowed purple
with yellow laces--again?),
Ice cream fund, SMILES!

 Dues are Due -- \$10.00. Don't miss your EXPO Edition or the new Membership Directory. Send your check to Marv Houg, Treasurer, 3330 44th St., N.E., Cedar Rapids, IA 52402

 The Membership Directory -- If you wish to update the nodule/blurb after your name in the Directory send changes NOW to: Mrs. Alberta Cray, 1125 J. Avenue, N.W. Cedar Rapids, IA 52405. February 15 deadline

Oct -- FOSSILMANIA IV -- Glen Rose, Texas
 Haven't seen the date but 'they say' a potato bust and Texas BBQ.
AFTER EXPO you can begin Phase I

 Because the upcoming EXPO Edition will be quite large, the Board of Directors has decided to make this a double issue-- April-May. This will not happen often.

June -- ISP (Indiana Society of Paleontology) -- Bedford Swap
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Every fossil in your collection has a story behind it. The inception of the idea for the following pages of the Digest from Wm. T. Watkins began at least 5 years ago when Harrell Strimple wrote he had contacted Mr. Watkins to do an article about Carboniferous Crinoids of Texas. Long silence followed. Then, in March of 1984 a letter from Mr. Watkins arrived which included 3 of 4 parts (spasms, he called them) of the article. The next letter, to quote Bill said, "an unfunny thing happened on my way to the typewriter to finish off Spasm 4 of the crinoid deal." The 'unfunny thing' was a demolished car and later surgery.

After Bill healed and all four 'spasms' were at hand the next obvious thing was a cover. Another quote--"I read your letter and said No! No! No! I'm not about to do anything like that. She must think I'm a ----- artist!...I had a plaster cast I knew was the right size. So I decided I'd try being a ----- artist."

The latest correspondence dated August 31, 1985, included the cover drawing of this issue. This is a bit extreme (the time span) but it is a pleasure to print the following 4 Spasms about 5 years later. Many thanks, Bill, for your article, your artwork, the reference to your co-authored publication, and your patience to finish a job then wait even longer to see it published. Can't you just see Harrell smiling?)

ROUGH TIME AT ROUGH CREEK

-- Wm. T. Watkins
 223 Lyric Drive
 San Antonio, Texas 78223



Driving across from Lampasos to San Saba, as a high cliff closed in ahead from the right, I stopped at Rough Creek crossing to visit the site where 5 years before I had found two slabs one of which contained on its upper surface over 30 specimens of the small crinoid Scytalocrinus sansabensis, Moore and Plummer. This locality is 160 miles from my home in south-east San Antonio, Texas. Determined then to find Moore's locality here, I had finally found these on my third trip up. The two slabs were in situ, partly covered with dirt and rocks at the base of the cliff of

Lemon's Bluff Limestone. This is in the Ato-kan Stage of the Pennsylvanian. Since I was interested in finding new species of crinoids it had done me a fat lot of good, 5 years ago, to find Moore's locality or rather the exact ledge from which they came.

Now, however, visiting this bluff again 5 years later I found a vertical crack or fissure about 12 or 18 inches back of the face and paralleling it for some distance. The fissure had been spread apart by dirt and rocks that had slid down from above into it. I immediately realized what it meant and that my work was

cut out for me right here. Armed with a permit from Mr. Brister, the property owner, a crow-bar, and a sledge hammer, I went to work toppling the rocks over down to the ledge I wanted. As the 7 inch thick slabs of this ledge came out each had to be snaked down to the stream below and the upper surface scrubbed. Those with fossils needed to be reduced in size for carrying to my car.

The impure limestone was dark and brittle and my sledge hammer served we well in trimming. I knew I had made remarkable fossil finds here and after I had cleared out all I could I still wasn't satisfied. I wanted more. The ledge was separated from the ledges above and below by a 1/4 to 1/2 inch layer of soft, dark shale. Also there were vertical cracks along the ledge averaging 18 to 20 inches apart. Now could each slab have a crack behind it? I tried to pry one out and was surprised to see it move. I continued and eventually worked it out. This tied in the next slab and the next. They all had cracks behind them. But Oh! How I worked, with wrecking bars, tire tools, anything that would help. Some came out without too much effort, others with uneven surfaces took hours. When I finished I left an odd-looking bluff behind with a recess in it where the morning sun left a shadow all along.

My job was at Kelly AFB in San Antonio so I had only week ends to do my excavating 160 miles from home. It took weeks of work. But getting those fossils on slabs home was just the first phase of the total effort required. I took one to a monument works and had the fossils sawed out onto a thinner slab with a diamond saw--\$8.00. Visited a tile works and learned how they cut masonry. Got the necessary equipment and experimented. That included an electric drill and an aluminum oxide cutting wheel. The most satisfaction one can derive from any hobby is when one is learning. I have learned and the results in specimens found are very satisfactory.

Among the specimens found was Chlidonocrinus echinatus, new genus, new species. Both names mean spiny and I believe it is the most spiny crinoid ever found. Every cup plate as well as every arm brachial are lined with spines or nodes and with numerous long cirri from a pentagonal shaped stem reaching up around the crown. It was quite a task just to clean these up for description because of the projections on the delicate things.

A pair of crinoids described as Polusocrinus calyculoides and Paragassizocrinus altus have

identical arms and cups with the exception of the base of the cup. Polusocrinus, the smaller, has a tiny stem, whereas Paragassizocrinus, the larger, has no stem at all but a single fused cone replaces the 5 infra-basils and is swollen. It is a floater, as are all species of this genus. This is the first occasion where the two have been found in association with each other. I tried hard to persuade Harrell to describe the Polusocrinus as the young of Paragassizocrinus, but he had seen smaller Pennsylvanian fused cones and shied off.

Moore and Plummer (1940) described two new species of crinoids from this locality. We added eight more new species of crinoids, besides starfish, 3 species of ophiuroids, or brittle stars, and echinoids. I sent the crinoids to Harrel Strimple along with a short resumé of the effort it took excavating them from the cliff and preparing them. Harrell picked it up quickly. He wrote to go on collecting Texas crinoids and we'd co-author a paper describing them. That's exactly what I wanted. With the nucleus of eight species I went all out for Texas crinoids. Over the years, a few from here and a few from there the collection built up, until we ended up with a total of 41 new species of crinoids, all described under the title of Carboniferous Crinoids of Texas With Stratigraphic Implications, by Harrell L. Strimple and William T. Watkins, in Paleontographica Americana, Vol VI No 40, 1969. This is one of the two publications put out by Paleontological Research Institution, 1259 Trumansburg Road, Ithica, New York 14850. Cost \$40.00.

CRINOIDS FROM BROCK AND KICKAPOO FALLS

With such good fortune I decided to hunt out another one of Moore's localities. This time the best. I headed for 3 miles southwest of Brock, near Weatherford, Parker County, Texas. This site is in the Brannon Bridge Limestone, Milsap Lake Formation, Desmoinesian, Pennsylvanian. In Moore's and Plummer's (1940) publication, while they, of necessity, deal mostly with dorsal cups, most of the complete crowns that they describe came from this locality. Out of Brock I got off on the wrong road but an old-timer directed me back to the

road leading to the old Consolidated School, the foundation of which remains and is near the crinoid site. Many people have collected here and it continues to produce. I gave the place a thorough collecting and came back about every two weeks and later after every hard rain or when the road, which runs right next to it was graded. I generally hunted alone. No one bothered me and at first no one seemed to be collecting there; later I found evidence of other collectors. I found crowns, but the matrix was hard and difficult cleaning was necessary. Those I found were of species that Moore had described. Some of these needed and generally got generic name changes. One of the most prolific crinoids was Schistocrinus, (now Sciadiocrinus). Moore set up three species of this genus from this place. Mine appear to be all one species grading from small, or immature, to large. Moore's S. parvus has been eliminated as a youthful Sciadiocrinus confertus. Beside these I found 6 new species and before publication I visited other collectors who donated 4 more species making a total of 10 new species from Brock. The top paragraph of the right hand column of page 159 of Texas Carboniferous Crinoids by Strimple and Watkins lists the crinoids reported by Moore and Plummer. The next paragraph lists those we added to it from Parker County. But the list shows only eight species. Two species are short as follows: Hydriocrinus larrainae and Ulocrinus extrorsus.

In the meantime I had located the Kickapoo Falls locality in northern Hood County just a few miles south of Brock, Parker County. The crinoids are in the shales below the Kickapoo Falls limestone, also in the Milsap Lake Formation, and altho some of the same species are found at both Brock and Kickapoo Falls, Pirasocrinus scotti has been found only at the latter. I found several specimens of this form, some with complete umbrellas of spines around the summit which corrected Moore's statement "four broad based spines without intervening small plates." to "Ten large spines with intervening small plates." Certainly Moore must have seen something on his specimen that led him to his erroneous statement. I was lucky here in finding a pocket of crinoids that I had to dig out. I came prepared with a piece of hardware cloth for sifting, in case there were small specimens. The Stenopecrinus longus came out in four pieces but thanks

to the sieve I got it all complete. I sent all parts to Harrell but the illustration on Plate 48 is minus two parts, so they got lost in the shuffle.

In all I found 5 new species in that dig and one elsewhere making 6 new species, all crowns, from this site, but one, a Hydriocrinus had the arms but only the radial plates of the cup left. Fortunately I later came across one of this species in a collection from Brock at Mrs. Lorraine Marrs, Waco, Texas, it was larger. Mrs. Marrs generously donated it and the name became Hydriocrinus larrainae, after her. This is the same Mrs. W. R. Marrs who found many of the splendid crowns used in the study of Texas crinoids by Moore and Plummer (1940). This is the first discovery of this species in America, having been reported only from Russia previously.

The largest and most beautiful crown of all that I found is Eirmocrinus grossus (Plate 30). The heavy rain that had fallen previously had ended. We approached Kickapoo Falls from the southwest and I had to wade knee-deep across above the falls to reach the locality. This beauty was waiting for me washed out by the rain. Just a little more rain and it would have been gone. As it was laying on its side some of the uppermost crown plates were loose and the umbrella of 13 spines fell apart as I lifted it. I carefully saved everything. The underside of the crown was in near perfect condition. The arms branch 6 times endotomously. That is, only the outer arms of each ray branches. The authors of THE TREATISE OF INVERTEBRATE PALEONTOLOGY used this specimen to illustrate "Morphology of Axillaries", on page T148, Book 1.

Of the crinoids I have found the one that I'm most proud of is Platycrinites remotus from Kickapoo Falls. The species name "remotus" is Latin for "Far off" with reference to the great lapse of time between it and other typical representatives of the genus. It is illustrated, mashed flat, on plate 47, Nos 8 and 9. This is undoubtedly the first bonafide Platycrinites found in the Pennsylvanian rocks anywhere in the world. This is the crinoid with the elliptical shaped stem segments found at numerous places but never a crown.

CORRECTING AN OLD DATE ERROR

Leaving my wife, Helen, asleep early one morning in a motel in Lampasas, I had coffee and drove southwest on the road that paralleled Espey

Creek. The road crossed the creek about 3 miles west of Lampasas where I stopped the car and started walking the bed of the creek. A 15 ft. wide dark deposit angled down the steep right bank from west to east for a hundred yards until it reached the bottom and spread out over the white bed of the creek. The crinoids were only in the lower layers. They were not numerous nor were they very good specimens being exposed for so long. Also in this very hard crystalline dark limestone they were difficult to recover but I did collect some. Later I came back and got more. A beauty I tried to collect but darkness overtook me before I could get it out I left until my next trip. That trip was put off too long.

Espey Creek west of Lampasas is normally a dry rain-drainage creek. Donaldson Creek which joins it just west of here, from the north and northwest. This area received what we once called a cloudburst or very heavy rain. As a result Lampasas was partly washed away. I recall driving thru Lampasas right after that. A house blocked the road, washed there by the high water. When next I visited the crinoid site there were no crinoids left. The lower layers with the crinoids had been ripped up and washed away by the torrent. It is strange that these had been here for over 45 years and then within weeks after I found them they are gone with the flood.

The "45 years" I'm sure of, for I came across an article in University of Texas Bulletin No 4329, "The Carboniferous Rocks of the Llano Region of Central Texas", by F. B. Plummer, February, 1950, (published after his death in 1947). Under Carboniferous Strata, Mississippian System, Chappel Formation, he starts with this historical account: "Discovery of rocks of lower Mississippian age in Texas was made by C. L. Baker in 1917. Baker found a ledge of fossiliferous limestone and conglomerate below the Bend Group in the bed of Espey Creek about 3 miles southwest of Lampasas. The fossils were sent to Dr. Stewart Weller, who confirmed the Lower Mississippian age and this discovery was noted by Matteson (1919, P. 174) in his account of oil geology of North Central Texas. The importance of the find, however, apparently was not realized by either Baker or Weller, since no adequate account of the discovery of the fossils was published by them, and credit for announcing the presence of Lower Mississippian strata goes to later workers."

The "Bend Group", mentioned above, is the Atokan (the Smithwick Shale and the Marble Falls Limestone, excluding the Slone). Dr. Weller was a crinoid worker and supposed authority on crinoids, which was not then as well known a science as it is today. Also Weller may have had some doubts about the accuracy of his decision since no crinoids were described. I sent my crinoids to Harrell Strimple. Altho, to me, they seemed to be a sorry looking lot I sent him eight specimens. In the Publication he illustrated 5 specimens, named and described 4 (plates 36 & 40), of which 3 are new species. Instead of agreeing with Dr. Weller that they were Lower Mississippian age, he has shown their age to be Earliest Pennsylvanian (Morrowan), or Late Mississippian. After studying those that he has described I am now in complete agreement with Strimple.

Harrell sent me a small crushed crinoid that he couldn't recall when he got it or from whom but he thought it had something to do with Texas crinoids. I remembered several years before he'd written me about one that Frank Crane had given him that the late Mr. J. P. Conlin, of Ft. Worth had given to Crane. It's origin was supposed to be out of the Pennsylvanian Series of Texas, but was so like a Permian form that Harrell viewed it with suspicion. I knew Mr. Conlin as quite a collector who specialized in ammonites. In fact I'd met him once years before.

As I was on annual leave and planned on a trip up to Ardmore, Oklahoma, I took the crinoid with me. I went to his home in Ft. Worth. A car was there and a ferocious dog in the house barked, but no answer to my knock at the door. I had a feeling that he was there. I went on up to Ardmore. I got back the next afternoon just a little earlier. He lived on a dead-end street. As it happened I followed a car in and parked behind him, got out and met him on his way to his house. When he knew who I was he was glad to see me and invited me in. He said he had been in the previous day when I called but he thought I was someone else he didn't care to see. I liked him. We talked about his ammonites. I showed him the little crinoid that Harrell had sent me. He reached up above the door and brought out two more just like it, one a perfect specimen. He gave them to me for the study and told me exactly where had found them southeast of Lake Bridgeport. I went up there and looked around. Found crinoid stem sections and plates and was satisfied that that was where they came from. It is

described in the publication as Stomiocrinus conlini in his honor, Plate 40, fig. 1-4.

PART IV

In the winter of 1965 Harrell and I decided to close down my end of the business. That is, collecting new species for the publication. We then had perhaps 25 new species which was enough.

In May Helen and I had a visit with Mr. and Mrs. Robert George. He worked at Kelly AFB. Both are members of Southwest Gem and Mineral Society of San Antonio. They told me of two sites, new to me, from which crinoids had been found. One at Mason, Texas, the other near San Saba. They had visited the place at Mason shortly after a rain and Mrs. George had found two specimen herself. The following Saturday I headed for Mason, it being nearer, 135 miles distant. I found the home of Mrs. JHugh Shearer. Her late husband found the site on the ranch of Mr. Kurt Zesch some thirty years before. He had collected some cups there and decorated 3 diamond-shaped slabs of concrete he made with the cups upside down on the surfaces one for each of his children. These slabs have lain under a tree in the front yard ever since with no apparent weathering to the specimens. Her son, Wilburn Shearer lives near and he took me out on a road thru the ranch and showed me the site over the fence. Permission to enter would have to await Mr. Zesch's return.

Later that day I went on to visit the Lambert Ranch 18 miles southwest of San Saba. Mr. Lambert came in apologizing for his appearance. He had just gotten in from climbing and oiling twelve 40 ft. windmills spaced 8 to 15 miles apart. They were very cordial. He took me up the hill back of the house to a quarry he had opened up in the rocks. This is where crinoids had been found by collectors. I found the evidence, broken fragments on slabs. Lambert has a listing with a map to his ranch in "Gem Trails of Texas", a booklet put out for gem and mineral collectors who come here from everywhere often in groups to collect--for a fee. It's a source of income for Lambert. The rocks take a high polish, are variegated in color and with crinoid stems running through the slabs make them very desirable for collectors. But poor me. I knew I had been thoroughly scooped and doubted the chance of finding even one specimen there. But no matter, I had to go ahead.

On June 5, 1965, I wrote to Strimple with the news of the two new localities. I wrote, "it's ironic I should run into this new information now when it's probably too late to make additions. Wish I had about a year to work these two sites out properly. Only a few days ago getting that paper completed seemed paramount and here I am now wanting to hold it up. But this surely is important data." No answer came back nor did I expect one until I had collected specimens from each location and sent them to him.

I learned that Mr. Zesch owned property on the San Juan River in Colorado just north of Pagosa Springs. The old man loved to fish and since he was lingering in Colorado I'd see what I could do at San Saba first. Of the crinoids I saw at Lamberts both good and bad, many, I might say, most, are flexibles (Editor's comment--see MAPS EXPO Edition Vol 7 No 4, 1984. MOSTLY ABOUT INVERTEBRATE FOSSILS -- Recommended Steps In Identification of a Crinoid (Harrell Strimple) p. 11-12.) One specimen, Oklahomacrinus spicatus (not a flexible) I found here was like some I found at Lemons Bluff, 35 miles east of here, indicating that the two sites are identical in age, or very nearly so. Yet Lemons Bluff produced no flexibles, only inadunates and small camerates. There were three flexibles all of different species I collected here and sent to Harrell. One he returned to me. One he illustrated on plate 34,

And finally I found a complete specimen of what Harrell described and named Dicromyocrinus sp. cf. D. texasensis, (Moore and Plummer). This species was originally described in 1940 by those authors as Ethelocrinus texasensis from a large cup. Since this is a complete crown it has added much to the knowledge of the species. Oh yes, this is shown on plate 54, nos. 8 and 9. That was the results from the Lambert Ranch near San Saba, only three good ones that went into the book, one of which was found by Mr. Lambert. Wow! I'm not the collector that I thought I was.

Mr. Zesch at Mason was back by now and I went to see him. He generously gave me permission to enter his ranch whenever I wanted to. This was in August. There had been no rain recently and the cattle did it no good. I found only one specimen. A good Graffhamicrinus. I knew crinoids were there if I could arrive right after a rain. This must have been a beach they washed up onto for one finds only dorsal cups

here never a crown. At Brock, Texas, when the crinoid died it fell into mud and water and was quickly covered away from air and oxygen. That's why so many one finds there are complete. I packed five specimens from Zesch Ranch and sent them to Strimple on December 7, 1965. The package included the above mentioned Graffhamicrinus, the two Mrs. George found, a specimen donated by Wilburn, and one I removed from one of the slabs at Mrs. Shearer's request to be named after her late husband who found the location. (Incidentally he always wrote his first name JHugh Shearer without period or spacing.) Strimple's reply of December 14 came back. It read: "Man, this is important! The Graffhamicrinus antiquus is a ringer for a species Bill Knapp had but didn't describe out of the Burgner Formation (Atokan) of Missouri. The Sinocrinus sheareri is a tie-in with a species from China. Not found before in the U. S. The Erisocrinus georgeae is the oldest I have seen of the genus. Mrs. George's other specimen is slightly broken but it is a Mooreocrinus. I am convinced that it would be well to wait until Spring so that you can have a go at good collecting."

What a relief! That took the pressure off. The rains finally came and I found, or acquired a total of eleven species, of which 10 are new and are shown on Plates 37, 38, and 39, also 32, 49 and 50. The Sinocrinus sheareri is shown on plate 39, figure 8 - 11. This is the specimen that was originally found by Mr. Shearer in 1935 put on this slab and lay in the yard in all weather ever since. The surface of the specimen is, under magnification, decidedly granular. In November on a trip to Mason, Wilburn brought me a slab he'd found while deer-hunting with bow and arrow on the Kothman Ranch just west of the Zesch Ranch. It was a small slab but covered with eroded crinoid crowns. I was sure and hoped it was of Mississippian age. He got permission for me to go on the ranch and he and I walked in.

The Zesch Ranch covers a large fault area. The Fault runs generally north and south for 6 miles thru the west side of the town of Mason. The Zesch Ranch, as well as the road south to it from Mason, is located on the east side of the fault. The west side borders the Kothman Ranch. There is an area here of several acres covered with thin bedded material, mostly limestone, lying on rocks of Ordovician Age. It is thinly fossiliferous

but by careful hunting we each found Archimedes and Pentrimites both of which are sure indications of Upper Mississippian deposits. Also I found three different crinoids. Phanocrinus trulleum, Plate 36, No. 1-3, and Culmicrinus barnettensis, Plate 52, No 12, are the crinoids of Mississippian age, also the slab found by Wilburn, Plate 50, No 5. I am very proud of those.

This completes 41 species for the publication: one from Oklahoma and forty from Texas.

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LABELING - CURATING - DOCUMENTING YOUR COLLECTION



Information a Label Should Contain: Geographic Information

The most important part of a label for fossil specimens is the information on the geographic locality and geologic position of the specimens. The name of the fossil may be changed or altered as opinions change or new studies are made, but the geographic coordinates do not change. In most of the United States the geographic co-ordinate system is the township and range grid systematically applied to new U.S. territories since the beginning of the 19th century. No such system exists for the original 13 colonies of the Atlantic seaboard or for Kentucky and Tennessee, two states created before 1800.

Townships and ranges are simply a way of numbering blocks of land, beginning along a latitude or longitude called a meridian. Townships are numbered north or south of a meridian and ranges are numbered east or west of a meridian. In this way the designation township 3 south (abbreviated T. 3 S.) and range 2 north (abbreviated R. 2 N.) indicates a specific block of land also called a township. Individual townships are divided into 36 one square mile blocks called sections, which are numbered sequentially along rows beginning in the upper right (northeast) corner of the township and numbered from right to left in the first row and left to right in the second row and alternating this pattern until section 36 is reached in the lower right (southeast) corner of the township. Individual sections typically are subdivided based on quartering into northeast, northwest, southwest, and southeast quadrants. Quarters can be further quartered as finely as one wishes to subdivide. The notation might be: SE1/4 SW1/4, which is read as the southeast quarter of the southwest quarter.

The quarters are smaller from right to left.

Localities in Kentucky and Tennessee can be designated by a Carter Co-ordinate grid, which is based on labeling 5-minute quadrangles of latitude and longitude. The international latitude-longitude system is shown on all United States Geological Survey (USGS) topographic maps, no matter what other grid system might also be given. Each 5-minute quadrangle is divided into 25 1-minute quadrangles sequentially numbered in the pattern of the township-range system. In this system it is also common to locate a site by measuring in feet from a north or south and an east or west line of a 5-minute quadrangle. The Carter Co-ordinate grid is shown on most of the published USGS geological maps of Kentucky, one of the few states completely mapped by both topographic and geologic quadrangles at the same 7.5-minute scale, approximately two miles to the inch.

The original 13 colonies along the Atlantic seaboard can be designated by latitude and longitude using published USGS maps.

In addition to the formal co-ordinate systems, the geographic information should include the distance along marked highways toward the site and whether the site is a roadcut, stream bank, quarry, hillside glade or other natural or man-made feature. As an example, Indiana University site 8127 contains the following information: Road cuts on north side of Indiana Highway 46, approximately 6.5 miles (10 kilometers) east of courthouse in Bloomington, Monroe County, Indiana, NW1/4 NE1/4 sec. 4, T. 8 N., R. 1 E., Unionville USGS 7.5-minute topographic quadrangle.

Alan Horowitz, Curator
Department of Geology
Indiana University
1005 East 10th Street
Bloomington, Indiana 47405

(XXX)

page 9

Address Changes -- Please update your Membership Directory

ROBERT CARROLL 3160 Wolverine, Ann Arbor, MI 48104
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Dept. of Geology
Monmouth College
Monmouth, IL 61462

Furniture Manufacturing. Will trade. Major interest
vertebrates. Has mammoth teeth, Salenia texana,
Mosasaur. Wants information on collecting sites in
other parts of the country. Meet others with same inter-
est.

The Mid-America Paleontology Society (MAPS) was formed to promote popular interest in the subject of paleontology, to encourage the proper collecting, study, preparation, and display of fossil material; and to assist other individuals, groups and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Membership fee: January 1 through December 31 is \$10.00 per household.

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). September, October, May, June and July meetings are scheduled field trips. The August meeting is in conjunction with the Bedford, Indiana Swap. November through April meetings are scheduled for 2 p.m. in the Science Building, Augustana College, Rock Island, Illinois. One annual International Fossil Exposition is held in the Spring.

MAPS official publication, MAPS DIGEST, is published 9 months of the year--October through June.

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MID-AMERICA PALEONTOLOGY SOCIETY

Mrs. Madelynn M. Lillybeck
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